

### **REMARKS**

In the Office Action, the Examiner has initially rejected claims 1-7 under 35 USC §102(e) as being anticipated by Roffman et al. or Mandell. The Examiner states that Roffman teaches a corneal contact lens having a central zone (22) with a first curvature ( $r_1$ ), and at least a first annular zone (23) located concentrically around the central zone (22). The Examiner further states that the first annular zone (23) is integral with the central zone and has a second curvature ( $r_2$  or  $r_3$  or  $r_4$ ) where the origin of the first curvature and the origin of the second curvature are not coaxial. The Examiner references column 2, lines 3-6 in this regard. Further, the Examiner states that the prior patent of Mandell teaches a corneal contact lens having a central zone and at least a first annular zone, wherein the curvatures of the central end first annular zone are not coaxial, with reference to column 5, lines 8-11.

With respect to the rejections under 35 USC §102(e), the applicant herein submits a Rule 131 Affidavit, swearing behind the patents of Roffman et al. and Mandell. In the enclosed Affidavit, the conception of the present invention as claimed occurred prior to the effective date of the Roffman and Mandell patents, and the applicant was diligent in reducing the invention to practice after such conception. Based upon this, the patents of Roffman et al. or Mandell have been removed as prior art, and the rejection based thereon should be withdrawn.

It is also noted that the instant invention also clearly distinguishes the inventions of Roffman and Mandell. The instant invention provides a contact lens design which is particularly useful in corneal refractive therapeutic applications, where the central curve is designed to reshape the cornea. In such situations, as described in the application, the past attempts at lens design have resorted to the use of "reverse curves", which are undesirable for reasons as stated in the application. The curves discussed relate to the curvatures imparted to the posterior surface of the lens, or the surface on the wearer's cornea. The Roffman and Mandell patents on the other hand, relate to the anterior or outer surface of the lens. In Mandell, the toric transition zone is designed on the anterior surface to refract light to focus at a close distance and avoid a "visual jump" between bi-focal zones. The surface of the lens on the corneal surface is simply matched to the cornea. Similarly, Roffman is directed at

providing a front or anterior surface design which is smoother and is said to eliminate dry eye. The newly added claim 22, as well as other claims are directed to this embodiment of the present invention.

The applicant also submits claim amendments and additional claims clarify aspects of the present invention. It is believed that these claims in conjunction with the claims originally submitted are now in condition for allowance, as no prior art reflects upon the characteristics defined thereby.

The applicant has attempted to clearly point out and claim distinguishable characteristics of the invention as related to the prior art, and it is believed that the invention as now defined clearly distinguishes thereover. The claims as amended are believed to be fully in accord with 35 USC §112, and favorable action hereon is thought to be in order and is hereby respectfully requested.

Respectfully submitted,  
Hahn Loeser + Parks, LLP



Scott M. Oldham  
Registration No. 32,712

SMO/meh  
Twin Oaks Estate  
1225 West Market Street  
Akron, OH 44313-7188  
(330) 864-5550

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Clean Paragraphs and/or Claims

1. (Amend) A corneal contact lens comprising:  
a central zone having a at least first curvature;  
  
at least a first annular zone located concentrically around said central zone, said  
first annular zone having at least a second curvature, wherein the origin of said  
first curvature and the origin of said second curvature are not coaxial.
4. (Amend) The contact lens according to claim 1, further comprising at least one  
second annular zone located concentrically around said first annular zone.
6. (Amend) A corneal contact lens comprising:  
a central curve having a first curvature, and a central curve origin;  
  
at least a first annular curve located concentrically around said central curve, said  
first annular curve having a second curvature, and an annular curve origin,  
wherein said central curve origin and said annular curve origin are not coaxial.
7. (Amend) A corneal contact lens comprising:  
a central curve having a central curve radius of curvature,  
  
at least a first annular curve located concentrically around said central curve, said first  
annular curve having a first annular curve radius of curvature, wherein said radius of  
curvature of said first annular zone is greater than said radius of curvature of said  
central zone.
8. (New) The contact lens as recited in claim 4, wherein the radius of curvature of the  
second annular zone is equal to or greater than the radius of curvature of the  
central zone.
9. (New) The contact lens as recited in claim 1, wherein the central zone comprises a

curvature selected from the group consisting of spherical, aspherical, toric, combined spherical and aspherical curves or combinations thereof.

10. (New) The contact lens as recited in claim 1, wherein the first annular zone comprises a curvature selected from the group consisting of spherical, aspherical, toric, combined spherical and aspherical curves or combinations thereof.

11. (New) The contact lens as recited in claim 1, wherein the at least first annular zone is comprised of a combination of a plurality of zones.

12. (New) The contact lens as recited in claim 11, wherein the plurality of zones comprise multiple annular zones.

13. (New) The contact lens as recited in claim 1, wherein the lens comprises a front surface and a back surface, with the first and second curvatures area formed on the back surface to be positioned on the cornea.

14. (New) The contact lens as recited in claim 1, further comprising at least one peripheral zone located concentrically around said at least first annular zone.

15. (New) The contact lens as recited in claim 14, wherein the axis of the origin of curvature of the at least one peripheral zone is not coaxial with the axis of the origin of the central zone and/or the radius of curvature of the at least first annular zone.

16. (New) The contact lens as recited in claim 1, wherein the radius of curvature of the peripheral zone is greater than the curvature of the central zone.

17. (New) The contact lens as recited in claim 1, wherein each zone is made of different lens material.

18. (New) The contact lens as recited in claim 1, wherein the curvature of the central zone is selected to cause reshaping of the cornea of the patient.

19. (New) The contact lens as recited in claim 1, wherein the contact lens may be machined from a single piece of plastic.

20. (New) The contact lens as recited in claim 1, wherein the thickness of the central zone and at least first annular zone are not consistent.

21. (New) A method of designing a contact lens comprising the steps of:

obtaining information relating to the characteristics of a person's eye;  
selecting a first curvature for a central zone of a contact lens based on the

characteristics;

selecting a third curvature for a peripheral zone of the contact lens based on the characteristics;

selecting a second curvature for independently connecting to the first and third curvatures, whereby the second curvature is flatter than the first curvature, and where the axis of the curvature of at least one of the first, second, and third curvatures are not coaxial with one another; and

fitting the lens to the person.

22. (New) A corneal contact lens comprising a lens body having first and second surfaces, with the first surface being positionable on the eye of a user,

the first surface having at least a central zone with at least one first curvature formed for a curve origin on a first axis, and at least one annular zone with at least one second curvature from a curve origin on a second axis which is distinct from the first axis.